

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A spray powder for the manufacture of a thermally insulating layer which remains resistant to high temperatures, ~~a coating of the type TBC, which can be~~ and is produced on a substrate by means of a thermal spraying process, wherein the substrate ~~can~~ has already ~~be~~ been coated with a ~~single or multilayer~~ single- or multi-layer part coating, ~~in particular a primer~~ and wherein at least one thermally insulating functional material is used, which on the one hand has a lower thermal conductivity than the substrate and on the other hand forms a chemically and thermally stable phase at ~~high~~ elevated temperatures, ~~characterised~~ characterized in that the spray powder comprises particles (1) which ~~respectively~~ have an ~~agglomerate-like~~ agglomerated microstructure (2) formed by a plurality of granules (3) adhering to each other, ~~in that these~~ the granules ~~are~~ being made of the at least one functional material, ~~and or the functional materials, in that~~ at least one further component ~~is present~~ made of an additive (4) or a plurality of additives, ~~in that this~~ the further component is being distributed finely dispersed on the surfaces (30) of the functional material granules (3), ~~i.e. mainly in their boundary zones (5) and that the further component in the given form or in a transformed form exerts~~ exerting a retarding or eliminating effect with regard to sintering compounds, ~~which can which~~ form at high temperatures between the functional material granules.

Claim 2 (currently amended): A spray powder in accordance with claim 1, ~~characterised~~ characterized in that, in relation to all the ~~component (3,4) components,~~ the component which is formed from the additive (4) or the ~~additives,~~ additives has a proportion of not more than 5 mol %, ~~preferably at the most 3 mol %~~ in that the functional material granules (3) have an average diameter d_{50} greater than 1nm and smaller than 10 μ m and that the particles (4) of the spray powder have an average diameter d_{50} in the range of 1 μ m to 100 μ m.

Claim 3 (currently amended): A spray powder in accordance with claim 1, ~~characterised~~ characterized in that the additive (4) or the additives are deposited between the functional material granules (3) of the particle (1) in a phase comprising metal salts, wherein these salts can be transformed thermally into metal oxides, so that the additive only takes on the effective form, which influences the sintering compounds after a transformation of the salts by means of a thermal treatment step.

Claim 4 (currently amended): A spray powder in accordance with claim 1, ~~characterised~~ characterized in that ~~the agglomerates, which form the particles (1) contain, respectively communicating, contain communicating~~ pore spaces open against the an outer surface (11) of the particle and ~~that~~ the additive (4) or the additives are deposited in ~~these~~ the pore spaces and also on the outer surface.

Claim 5 (currently amended): A spray powder in accordance with claim 1, ~~characterised~~ characterized in that the functional material granules (3) comprise one or more of the following materials:

- zirconium oxide, in particular ~~stabilised~~ stabilized zirconium oxide YSZ;
- a ceramic material such as lanthanum ~~zirconate~~, zirconate, which has a pyrochlore structure $A_2B_2O_7$, wherein A and B are present in a cationic form A^{n+} and B^{m+} , respectively with value pairs n, m = 3, 4, or ~~2, 5~~ 2, 5 applying to their charges $n+$ and $m+$, the formula for the pyrochlore structure generally being $A_{2-x}B_{2+x}O_{7-y}$ ~~$A_{2-x}B_{2+x}O_{7-y}$~~ , and the following chemical elements can be selected as A and B:

A = La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb or a mixture of these elements and B = Zr, Hf, Ti;

- a magnetoplumbite phase $MMeAl_{11}O_{19}$,

with M = La, Nd and Me = Mg, Zn, Co, Mn, Fe, Ni, Cr;

while the additive (4) or the additives ~~are, for example, comprise at least one of Al-, Mg-, and/or~~ and/or La-oxide, yttrium ~~aluminium~~ aluminum oxide or a spinel, ~~in particular magnesium aluminium oxide.~~

Claim 6 (currently amended): A spray powder in accordance with claim 1, ~~characterised~~ characterized in that each additive (4) or the transformed form of this which can effectively influence the sintering process is not miscible with the functional material, so that diffusion into the functional material is ~~extensively~~ substantially avoided.

Claim 7 (currently amended): A method for the manufacture of a spray powder ~~in accordance with claim 1, characterised~~ having particles which have an agglomerated microstructure formed by a plurality of granules adhering to each other, the granules being made of the at least one functional material, and at least one further component made of an additive or a plurality of additives, the further component being distributed finely dispersed on surfaces of the functional material granules, the further component exerting a retarding or eliminating effect with regard to sintering compounds which form at high temperatures between the functional material granules, the method being characterized in that

A1) at least one of the additives (4) is introduced into a porous agglomerate of the functional material granules (3) by means of an impregnating process or that

A2) agglomerates are manufactured from a mixture of the functional material granules and the finely dispersed additive or a homogenous or colloidal solution of the additive, ~~wherein the agglomerates are preferably produced by the spray drying of a slurry and a subsequent calcining.~~

Claim 8 (currently amended): A method in accordance with claim 7, ~~characterised~~ characterized in that, in a first step, the additives are added to the ~~porous agglomerate~~ agglomerated microstructure in the form of a metal salt solution or are mixed with the ~~functional material granules (3)~~, whereby ~~these~~ the salts can be transformed thermally into metal oxides, in a second step the mixture is dried, and in a third step the salts are transformed by means of a thermal treatment into a form which ~~can influence~~ influences the sintering process effectively.

Claim 9 (currently amended): A method in accordance with claim 7, ~~characterised~~ characterized in that, in a concluding step, the ~~agglomerate-like particles (4)~~ are melted in a plasma flame ~~for a short while~~.

Claim 10 (currently amended): A coated substrate ~~with~~ comprising a thermally insulating layer, ~~which is manufactured from a spray powder in accordance with claim 1~~ comprising particles which have an agglomerated microstructure formed by a plurality of granules adhering to each other, the granules being made of the at least one functional material, and at least one further component made of an additive or a plurality of additives, the further component being distributed finely dispersed on surfaces of the functional material granules, the further component exerting a retarding or eliminating effect with regard to sintering compounds which form at high temperatures between the functional material granules.

Claim 11 (new): A spray powder according to claim 1, wherein the further component is finely dispersed in boundary zones of the surfaces.

Claim 12 (new): A spray powder according to claim 2, wherein the component which is formed from the additive or the additives has a proportion of at most 3 mol %.

Claim 13 (new): A spray powder according to claim 5, wherein the spinel comprises magnesium aluminum oxide.

Claim 14 (new): A method according to claim 7, wherein the agglomerates are produced by spray drying a slurry and subsequent calcining.

Claim 15 (new): A spray powder for the manufacture of a thermally insulating, high-temperature resistant layer on a substrate comprising a plurality of agglomerated granules which adhere to each other to form particles and which are made of at least one functional material and at least one component comprising at least one additive, the component being dispersed over surfaces of the granules and retarding the formation of sintering compounds between the granules which form at high temperatures.